Introduction Results

Coop Farm
Okayama 1st Farm
Plant: Momotaro tomatoes
System: MIKUHIDE I
+ TEREGRORY

Yamaguchi Prefecture Nakanome Farm
Plant: Tomatoes
System: MIKUHIDE II + GT6A

Nishimura Farm
Plant: Strawberries
“Kaorino,” “Akihime,”
“Benihoppe,” “Oi C Berry”
System: MIKUHIDE II + GT6A

Mr. Miyamoto
Plant: Grapes
System: MIKUHIDE I

Company M
Plant: Grapes
System: MIKUHIDE II + GT6A

Takehisa Nouen
(Green Thumb’s own farm)
Plant: Momotaro tomatoes
System: MIKUHIDE II + TEREGRORY

In addition to the above, our products are also used in agricultural high schools in Okayama Prefecture. (As of August 2024)

System Configuration

* MIKUHIDE I installation example

* MIKUHIDE II + GT6A installation example

* Example smartphone displays for MIKUHIDE II + GT6A

<MIKUHIDE I>

This is a system that detects the daily changes in the weather and automatically waters the plants at the optimum time. The amount of irrigation water can be adjusted by the user.

<MIKUHIDE II>

This is a system that automatically performs the optimal cultivation using an accumulated algorithm to adjust the timing of irrigation and the fertilizer concentration depending on the weather conditions.

<GT6A>

It is possible to set up to six systems with different fertilizer concentrations and irrigation amounts. There are also the options to use control by sensors, and to collect data from each sensor.

<TEREGRORY>

This is a system that realizes full-scale IT agriculture by using a PC, tablet or smartphone to remotely manage and control the various environmental controls in greenhouse cultivation.

Inquiry Contacts

Green Thumb Co., Ltd.
MIKUHIDE Website

Green Thumb Co., Ltd.

Location	1164 Shoda, Oku-cho, Setouchi City, Okayama Prefecture
Established	February 1997
Capital	5 million yen
Representative	Osamu Takehisa
Contents of business	Design and development of hydroponic equipment, and sales of fertilizers and materials
Telephone	0869-25-0930
FAX	0869-25-1939
e-mail	info@gtagri.com
Website	https://www.gtagri.jp

Patented

Patent No. 6651191

Cultivation Support System, Controller and Control Method

MIKUHIDE
実育秀

MIKUHIDE

Cultivation support system using an irrigation and fertilizer supply algorithm with climatic variation detection

MIKUHIDE

Green Thumb Co., Ltd.

Green Thumb Co., Ltd. is an organization that provides growers with hydroponic systems that enable the stable production of agricultural products that are loved by consumers to share joy and excitement together with them.

MIKUHIDE
Automatic control of irrigation and fertilizer supply in accordance with environmental changes and the stages of growth

MIKUHIDE provides a significant improvement in profitability

The proper control of the irrigation and fertilizer supply makes it possible to reduce the use of fertilizers and pesticides, making the cultivation more environmentally friendly. It is also possible to reduce the volume of leaves discarded due to pest outbreaks and damage.

Cultivation with less agrochemicals is possible

Example crops supported

The cultivation algorithm is further enhanced when results are accumulated in actual use.

Cherry tomatoes, tomatoes, grapes, strawberries, green peppers, cucumbers, eggplants, etc.

Also used for brand varieties

The "Hare Tomatoes" that are sold through regular purchasing from the Okayama Coop are cultivated with stable quality and yield.

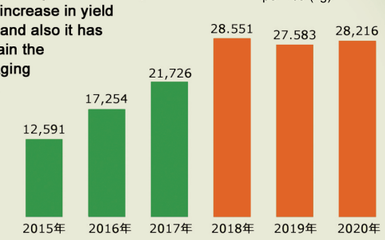
* Cultivation status by MIKUHIDE

Own-company farm results for tomato yields

After the introduction of the system in 2018, there was a significant increase in yield from the previous year and also it has been possible to maintain the high yield despite the aging of the greenhouse film.

In addition, there was a dramatic drop in the softening, splitting, and rotting of the fruit, and the high shipping rate greatly improved profitability.

<per 10a (kg)>



Sales revenue increase of approximately 4 million yen before and after the introduction to the company's own 16 a farm

Quality stabilization and yield improvement

By using an algorithm that is based on the sensor information and past results, the system supplies fertilizer in accordance with the environmental changes in the greenhouse.
This prevents root damage and wasted fruit and thereby enables the maintenance of high quality and increased yields.

Automatic 24-hour control of irrigation water and fertilizer supply

The system automatically adjusts the irrigation timing and fertilizer concentration according to the weather conditions and performs the optimal cultivation.
It is possible to build systems for various facilities by combining the systems, such as GT6A with TEREGRORY.

Environmental

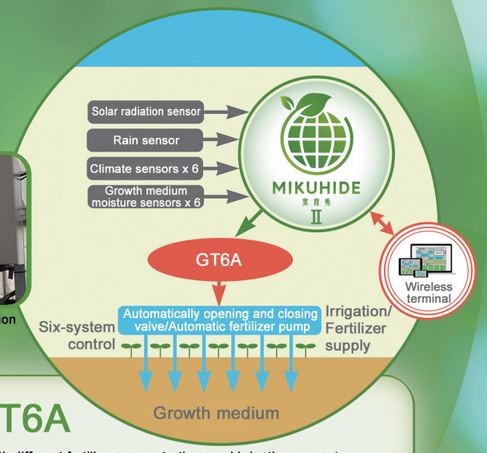
Quality

MIKUHIDE
実育秀

Efficient

Compatible with a variety of items and cultivars to be grown, and also with various types of media, such as potting and rockwool.
It is also possible to manage and adjust the EC (electrical conductivity) values, irrigation, and fertilizer to suit each growth stage and plant.
The values from various sensors can be checked with various wireless terminals such as smartphones, and settings can be changed remotely, which expands the possibilities for farming as a side job.

* MIKUHIDE II + GT6A installation example

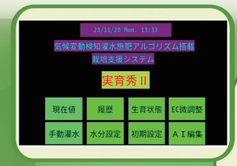


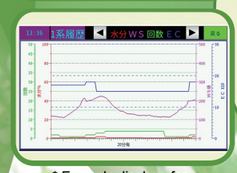
MIKUHIDE II + GT6A

With GT6A, it is possible to set up to six systems with different fertilizer concentrations and irrigation amounts.
It is also possible to connect optional control using sensors such as solar radiation, temperature and humidity, and growth medium moisture content sensors.
By connecting to a PC, it is possible to collect each setting value, the irrigation solution data, and data from each sensor.
Entering details such as the fertilization amount and intervals into the system enables the automatic management of irrigation and fertilization with nutrient solution.
This is then performed automatically 24 hours a day.

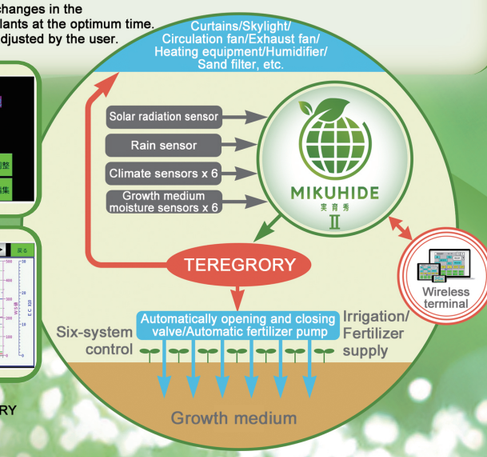
MIKUHIDE II + TEREGRORY

TEREGRORY is a system that can perform the integrated management and control of the various environmental controls used in greenhouse cultivation.
Monitoring and control are possible remotely via a PC, tablet, or smartphone.
This maintains the greenhouse environment automatically 24 hours a day and realizes both reduced labor requirements and improved quality and yield.
This is a system that detects the daily changes in the weather and automatically waters the plants at the optimum time.
The amount of irrigation water can be adjusted by the user.





* Example displays for MIKUHIDE II + TEREGRORY



* MIKUHIDE I installation example

MIKUHIDE I

This is a system that detects the daily changes in the weather and automatically waters the plants at the optimum time.
The amount of irrigation water can be adjusted by the user.